

What is claimed is:

1. An electric fluid pump comprising:
an upper housing having a fluid inlet and outlet;
5 an impeller seated within said upper housing for pumping fluid between said inlet and said outlet, said impeller including at least one magnet secured thereto;
a lower housing for mating with said upper housing, said lower housing having an upper wall for closing said upper housing and a shaft extending from said upper wall for rotatably supporting said impeller;
10 a stator seated within said lower housing and spaced from said impeller by said upper wall, said stator including a plurality of pillars supporting a winding of coils for producing a magnetic field to energize said magnet and rotate said impeller, and a plurality of top plates covering each of said coils and spaced apart by a predetermined gap for maintaining the magnetic field between said stator and said impeller; and
15 an end cap for closing said stator within said lower housing.
2. An electric fluid pump as set forth in claim 2 wherein each of said top plates of said stator includes bevelled ends for defining tapered gaps between adjacent top plates to control said magnetic field between said stator and said impeller.
- 20 3. An electric fluid pump as set forth in claim 3 wherein said stator includes a toroid plate for supporting each of said pillars.
4. An electric fluid pump as set forth in claim 3 further including an electronic control
25 assembly seated between said stator and said end cap for selectively energizing each of said coils to produce a magnetic field and control said rotation of said impeller.
5. An electric fluid pump as set forth in claim 4 wherein said impeller includes a

plurality of vanes for directing fluid within said upper housing between said inlet and said outlet.

6. An electric fluid pump as set forth in claim 5 wherein said lower housing is molded of polymeric material with said upper wall formed integrally therewith for dissipating heat generated from said stator.

7. An electric fluid pump as set forth in claim 6 further including a sealing gasket seated between said upper housing and said lower housing for sealing fluid therebetween.

8. An electric fluid pump as set forth in claim 7 further including an o-ring seated between said stator and said end cap for sealing said lower housing.

9. An electric fluid pump as set forth in claim 1 wherein said end cap includes a hollow channel extending therethrough.

10. An electric fluid pump as set forth in claim 9 further including a first flow tube extending between said end cap and said upper housing in fluid communication with said inlet for passing fluid through said end cap.

11. An electric fluid pump as set forth in claim 10 further including a second flow tube extending between said end cap and said upper housing and in fluid communication with said outlet for receiving fluid flowing from said end cap.

12. An electric fluid pump as set forth in claim 8 wherein said impeller is formed from injection molded plastic and integrally formed with said magnet encapsulated within said impeller facing said upper wall of said lower housing.